HSS Safety Share

Electrical Safety

Electrical hazards can cause burns, shocks and electrocution (death).

Safety Tips

- Assume that all overhead wires are energized at lethal voltages. Never assume that a wire is safe to touch even if it is down or appears to be insulated.
- Never touch a fallen overhead power line. Call the electric utility company to report fallen electrical lines.
- Stay at least 10 feet (3 meters) away from overhead wires during cleanup and other activities. If working at heights or handling long objects, survey the area before starting work for the presence of overhead wires.
- If an overhead wire falls across your vehicle while you are driving, stay inside the vehicle and continue to drive away from the line. If the engine stalls, do not leave your vehicle. Warn people not to touch the vehicle or the wire. Call or ask someone to call the local electric utility company and emergency services.
- Never operate electrical equipment while you are standing in water.
- Never repair electrical cords or equipment unless qualified and authorized.
- Have a qualified electrician inspect electrical equipment that has gotten wet before energizing it.
- If working in damp locations, inspect electric cords and equipment to ensure that they are in good condition and free of defects, and use a ground-fault circuit interrupter (GFCI).
- Always use caution when working near electricity.

Electrical Counterfeits Can and Do Kill

Every day, counterfeit electrical products are finding their way into our homes, businesses, and public institutions. These fraudulent products pose a serious financial and legal liability to the electrical industry, and they have become a grave safety crisis for our communities - a crisis that requires immediate action. Counterfeit electrical products pose significant safety hazards, and can cause deaths, injuries and substantial property loss in the home and the workplace if left undetected.

Tips on How to Avoid Purchasing Counterfeit Goods

- Only purchase electrical products directly from the manufacturer, a reputable distributor or retailer.
- Buyers should beware of bargains that seem too good to be true. Products may be cheap because they are counterfeit or defective.
- Check the warning label. It should be free of grammatical errors and not conflict with information elsewhere on the package.
- Look for the name and contact information of the manufacturer.
- Avoid no-name products or products sold at bargain centers.

Office Safety

You've just brought home a new piece of equipment for your office. You're ready to set it up and turn it on, but you run into one small problem. There's no place to plug it in. What do you do?

If you're like millions of people, you'd probably use an extension cord to reach the nearest unused outlet. Or you might add another power strip to the same outlet being used for your other equipment.

Converted Offices

Nearly one third of American households now have a home office. If you have converted an older building, home or room into an office, it is important that the electrical system can handle the load. Make sure new office equipment will not overload your circuits. Contact a licensed electrician to inspect your electrical system.

Potential Hazard:	What To Look For:	Remedy:
Overloaded circuits can cause an electrical fire.	Outlet or wall is warm to the touch; outlet is discolored; circuit breakers frequently trip or fuses frequently blow; a burnt smell of insulation is noticeable.	Have an electrician run a dedicated circuit and install additional outlets.
Overloaded extension cord can cause an electrical fire.	Extension cord is warm to the touch.	(1) Use an extension cord with the same or larger wire size as the cord being extended. (2) Since extension cords are designed for temporary use, have an electrician install additional outlets and you don't need to use extension cords.
Ungrounded outlets that will not protect you from an electrical shock in the event of a short circuit.	Equipment cord has a three-prong plug, but the nearest outlet has only two slots for the plug.	(1) Inspect wiring at the outlet to see if there is a ground wire. If there is a ground wire, replace the existing outlet with one that accepts a three-prong plug, and connect the ground wire to the outlet. (2) If there is no grounding wire, have an electrician run a new circuit with ground and install new outlets.
Improper placement of extension cords can cause a fire or cause someone to trip.	Extensions cords running through walls, under carpet or furniture, across doorways, or draped over heaters or equipment.	Try rearranging office furniture; or better yet, add more outlets in the room.

Electrical Safety FAQs

What's wrong with using an extension cord or a power strip to run more electrical equipment?

In solving the problem of too few outlets, you may create another - an overloaded circuit. If too many pieces of equipment are plugged into the same outlet and they're all on at the same time, more current may be running through the outlet than it can handle. When that happens, the wiring or the outlet will overheat and this could potentially create an electrical fire. Overloading is even more of a problem with extension cords.

Why is an overloaded outlet a problem?

An overloaded outlet can overheat and potentially create an electrical fire.

To prevent other electrical hazards, review this list and then take steps to remedy the situation.

What types of hazards are caused by power surges?

Temporary power surges can damage equipment and cause computer programs to lock up and become corrupted. Many people assume that power surges are caused mainly by lightning strikes, but 80 percent of them are generated from within the home.

What causes power surges besides lightning?

Common sources of power surges include household appliances such as air conditioners, washing machines, clothes dryers and refrigerators. Office equipment, including laser printers, photocopiers and fluorescent lights also generate temporary power surges.

How can I protect my office from power surges?

There are several devices that can provide protection from power surges. The first line of defense is an inexpensive power strip that incorporates surge protection. These devices often cost between $20 and $80. You may want to purchase power-strips with the maximum amount of surge protection, including protection for telephone and data lines.

Another option is to install surge-protected wall receptacles. "Quad receptacles" that have four outlets with built-in surge protection can replace standard electrical outlets.

For more robust protection, check into two other devices: a panel-mounted surge protector installed next to the circuit breaker panel, and a meter socket surge arrestor installed at the electric meter. These devices can provide greater surge protection and should be installed by a licensed electrician.

I have problems with brownouts. What can I do?

Blackouts and brownouts, now a more frequent occurrence in certain parts of the country, can also damage office equipment and cause the loss of important data.

The best solution for preventing this is to purchase an uninterruptible power supply (UPS). Not only does a UPS device allow time for an orderly shutdown of a computer when the power goes out, it also regulates the flow of electricity, smoothing out the current before it goes to equipment. Some

UPS devices also incorporate surge protection.

Will surge protectors protect me from overloaded circuits?

Surge protectors and UPS devices protect equipment, but they do not protect from the potential hazards of an overloaded circuit. Make sure the electrical load is not too great for the circuit. A licensed electrician can check your electrical system and provide guidance on the capacity of electrical circuits in your office.

Telltale signs of overloading include:

- outlets warm to the touch;
- outlets that are discolored;
- circuit breakers that frequently trip
- fuses that frequently blow;
- burned insulation odors; and
- extension cord that are warm to the touch.
- To prevent these electrical hazards, contact a licensed electrician to install dedicated circuits where needed. It is also smart to install outlets to eliminate the use of extension cords.